and 5 treat of the Florideæ, which are concluded in the sixth part. Then follow the Phæophyceæ; but before touching on these, a few points relative to some of the Florideæ call for observation.

M. Hauck tells us that in Gelidium the cystocarps are of two kinds—(1) those in which the placenta is basal, and have consequently only one series of gemmidia; (2) those in which the placenta is central, on both sides of which the gemmidia are placed. M. Hauck does not seem to be aware that the former were long ago separated by Dr. Agardh from Gelidium, under the name of Pterocladia, the typical species of which is *Pt. lucida*, a very common alga in the Southern Ocean. The *Gelidium capillaceum*, described at p. 190, is a true Pterocladia, and has been described as such by M. Bornet under the name of *Pt. capillacea.* M. Hauck mentions this name among the synonyms of *G. capillaceum*, and at p. 191, fig. 82, he gives us copies of M. Bornet's figures of the cystocarps of this plant, and also of Gelidium; thus showing the characteristic differences between the two algæ; it is therefore surprising to find that M. Hauck still retains the old name of the plant, and places it under the genus Gelidium.

The cystocarpic fruit of *Dasya punicea*, apparently unknown in the Adriatic, was found on our southern coast as long ago as 1859. Before that time a specimen bearing cystocarps was collected by Miss Catlow in Jersey, and Dr. Harvey gave to it the provisional name of *Dasya catlowviæ.* There is considerable difference in the aspect of the plants which bear cystocarps and those which bear stichidia; so much so, that they have been taken for distinct species. British specimens of this plant are much larger than those of the Adriatic.

M. Hauck describes the tetraspores of *Melobesia corallina* as "zweitheilig," and he refers to Solms' "Corallinenalgen des Golfes von Neapel," Table III., fig. 23. Now, on turning to this figure in the work of Graf Solms, it will be seen that the tetraspores are 4-partite. It is true that they have been described by MM. Crouan and Areschoug as dipartite, but, according to the observations of M. Rosenoff in his very interesting "Récherches sur les Melobésiées," p. 45, there seems good reason to believe that, although tetraspores are often found divided into two parts only, the complete number is four.

With regard to *M. macrocarpa*, M. Hauck is apparently right in uniting it with *M. pustulata*, and also in considering *M. corticiformis* as a synonym of *M. membranacea.*

In a former number of his work, M. Hauck had stated that the tetraspores of Nemaleon were unknown. They had, however, been described by Dr. Agardh in "Sp. Gen. et Ord. Algarum," vol. ii. p. 417, and again in the "Epicrisis," p. 507; but the author did not, in either work, state in which species he had found them. Some uncertainty, therefore, existed on this point; and Thuret was of opinion that up to his time there had been no trustworthy record of the discovery of the tetraspores of Nemaleon. It would have been easy to solve the doubt by an appeal to Dr. Agardh, who is always ready and willing to impart information, but no one seems to have thought of adopting this course. The writer is glad to be able to mention, on the authority of Dr. Agardh, that he (Dr. Agardh) found tetraspores on a plant of *Nemaleon multifidum* from Copenhagen, but he had met with them only once. It is hoped that this statement will finally settle the question.

The description of the second division of the marine algæ, Phæophyceæ, is begun at p. 282 with the Fucoideæ; these are followed by the Dictyoteæ, and after these follow the Phæozoosporeæ. Each order is preceded by a careful description of the structure and fructification of the plants included in it, and an enumeration of the genera; in the case of the Phæozoosporeæ, a short diagnosis of each family is inserted. We are glad to see, from the long list of synonyms appended to the description of many plants, that M. Hauck has greatly diminished the number of species, especially of those from the Adriatic.

British algologists will find in the later numbers of this work, as well as in those which preceded them, much that is interesting and instructive. The succeeding numbers will be welcome. It is hoped that they will be followed by a good index, which will add very much to the value of the work. MARY P. MERRIFIELD

METEOROLOGICAL OBSERVATIONS FROM BEN NEVIS

A WEATHER REPORT from the Ben Nevis Observatory is now published daily, which gives the observations made at 9 a.m. and 9 p.m., these being the hours adopted by the Meteorological Societies of the British Islands, to which are added the highest and lowest temperatures, the amount of rain and snow in all cases where it is possible to measure it, the height of the snow on the plateau, measured by the snow gauge, the hours of sunshine, taken directly from the sunshine recorder, and the quantity of ozone, droughts, changes of wind, auroras, glories, halos, electrical and other phenomena, recorded as they occur. The record is strictly one of observations, and as these are made at the usual observing-hours, British meteorologists and all persons interested in the weather are thus afforded the means of comparing their own observations with those made at Ben Nevis Observatory, which is by far the most valuable high-level station we possess, as furnishing data of the first importance in the study of the weather changes of Europe. In the winter climate of the Ben, the problem of hygrometric observation is beset with formidable difficulties. With a view to the practical solution of these it is part of the winter's programme that Mr. Omond conduct a series of investigations with a hygrometer of a novel description specially designed by Prof. Chrystal for the purpose. In the meantime, and until the problem be solved, the word "Sat," meaning saturation, is entered in the wet bulb column in all cases when the wet does not read lower than the dry bulb, it being evident that in such cases the air is all but, if not altogether, saturated. Indeed, a saturated atmosphere at all temperatures may be almost regarded as a persistent feature in the climatology of the Ben. Occasionally, however, as recently happened about Christmas and the New Year, a sudden change sets in, the clouds clear away, the sun blazes out in a sky of marvellous clearness, and a dryness of air comes on such as is rarely if ever experienced at lower levels. In these circumstances the dry and wet bulb readings separate to a degree so extraordinary that Glaisher's tables are no longer of any use in calculating the humidities of the air. As the periods of sudden and intense dryness of the atmosphere are intimately connected with the anti-cyclonic systems prevailing at the time in north-western Europe, it is not improbable that a careful record and study of them will lead to a more exact forecasting of some of our most important weather changes.

By and by the observations, combined with those made by Mr. Livingstone at the low-level station at Fort William, will furnish the data for ascertaining what is the normal distribution of pressure, temperature, and humidity in the stratum of the atmosphere between the top of Ben Nevis and the level of the sea at its base. These being once determined, all deviations therefrom, whenever occurring, will be readily seen. When the departures from the normals to subsequent changes of weather have been further investigated and their relations more accurately determined, the high expectations formed regarding the part to be played by the high-level station on Ben Nevis in contributing important data towards the forecasting of the weather of the British Islands will doubtless be realised. It must not, however, be forgotten that

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this intensely practical problem is an excessively difficult one, requiring for its successful prosecution no small expenditure of time, labour, thought, and money.

NOTES

THE Royal Society at their last meeting elected the following five *savants* foreign members:—Anton de Bary (Strasburg), Carl Gegenbaur (Heidelberg), Leopold Kronecker (Berlin), Rudolph Virchow (Berlin), Gustav Wiedemann (Leipzig).

WE are informed that it has been arranged that Sir William Thomson will give, at Johns Hopkins University during the first twenty days of October next, eighteen lectures on "Molecular Dynamics."

CAPTAIN W. J. L. WHARTON, R.N., at present in command of H.M. surveying vessel *Sylvia*, has been selected to succeed Capt. Sir F. Evans, K.C.B., as Hydrographer to the Navy.

ON Tuesday afternoon, at Oxford, Convocation witnessed in the Sheldonian Theatre the most exciting scene that has been enacted in the University since the opposition to Dean Stanley as Select Preacher. Last summer Convocation passed by a small majority a vote of 10,000*l.* for a new physiological laboratory. The vote was opposed by the anti-vivisectionists and by some on the ground of economy. A memorial got up by Mr. Nicholson against vivisection having produced no effect on the Council, the opponents of Prof. Burdon Sanderson determined to oppose the decree brought before Convocation on Tuesday for empowering the sale of stocks for the 10,000*l.* voted last June. The decree was supported by the Dean of Christchurch, Dr. Acland, and the Warden of Keble, and was opposed by Prof. Freeman and Mr. Nicholson. After a stormy debate the vote was carried by 188 votes against 147. The result was received with enthusiasm, and Oxford is to be congratulated on it. To what shifts Dr. Sanderson's opponents were put may be seen from what the *Times* calls "the most astonishing speech" of Mr. Freeman the historian, "who afforded a curious example of the confusion of thought into which even intelligent men may be led by an over-indulgence in sentiment. It would be as reasonable, said Mr. Freeman, for the historian to illustrate the festivities of Kenilworth by an actual bull-baiting as for the physiologist to experiment upon living animals. Mr. Freeman, in his zeal to establish the scientific character of the historian, forgets the difference between description and discovery, and ignores the fact that the physiologist, at least under the existing law, makes his experiments not for the instruction of pupils, but with a view to discover what is as yet unknown. A more curious article in the indictment against vivisection we have not met with since the celebrated letter in which Sir George Duckett told the Royal Commission that he had no evidence to give, but that he considered vivisection 'an abomination introduced from the Continent going hand in hand with Atheism.'" The *Times* in its leader on the subject treats it sensibly and moderately. "All those who are open to argument have been long ago convinced that science cannot proceed on her beneficent way without the aid of experiments, some of which must be painful; and those who are not open to argument, and those who believe, like some of the wiseacres whose opinion is on record, that 'medical science has arrived probably at its extreme limits,' are not likely to be convinced by anything that can be said or by any facts that can be brought against them. Parliament, on the recommendation of one of the strongest Royal Commissions ever appointed, has legislated in the matter, and physiological experiment is now under limitations as severe as it is possible for it to be consistently with any kind of progress in discovery. Abuses are of the rarest occurrence. Men like Dr. Sanderson are not only humane, but they are conscious that public opinion is awake on the matter, and their discretion as to what should be done and what should not is absolutely to be trusted. It is to be hoped that the sensible action of Convocation will not only encourage the Waynflete Professor to proceed as his scientific conscience may guide him, but will convince the well-meaning but irrational opponents of scientific freedom that further action on their part would be not only vexatious but unsuccessful."

BY the election of Dr. J. H. Gilbert to the separate chair of Rural Economy, Oxford has gained a man of European reputation, whose advent to the professoriate all parties will welcome.

DR. P. P. C. HOEK, of Leyden, writes to inform us of the death of Prof. Dr. H. Schlegel, Director of the Royal Museum of Natural History at Leyden, on January 17 last. Schlegel was born in 1804 in Altenburg (Saxony). It was intended to make him a brazier, but on his paying a visit to Vienna about 1824, his love for natural history was awakened. He came to Leyden in 1825, and tried to obtain an appointment as traveller for the Museum of Natural History, of which Dr. Temminck was then superintendent. He did not receive that appointment, but stayed in the Museum as preparator. He remained in this position until he was nominated conservator in 1839. He was appointed to the post of Director of the Museum in 1858 after the death of Temminck. Schlegel was doctor *honoris causâ* of the Leyden University, member of the Royal Academies of Sciences of Amsterdam and Berlin, &c. The Leyden Museum of Natural History, well known to every zoologist, has become under Schlegel's superintendence one of the richest in existence. For descriptive zoology, and especially that of the vertebrata, (reptiles, birds, and mammals), Schlegel was a first authority; the number of papers and monographs published by him in these groups is very considerable, and their scientific importance great.

THE death is announced of M. Richard Cortambert, *fils*, at the age of forty-eight years. He was attached to the geographical department of the National Library, and, in company with his father, had published many geographical works.

ADMIRAL MOUCHEZ read a paper before the Paris Academy of Sciences at the sitting of February 4, in which he stated that it was impossible to make any observations with large instruments in the old establishment at present the headquarters of French astronomy. He proposes to erect a new observatory on a site in the vicinity of Paris. Admiral Mouchez states, moreover, that to find the money required it would be advisable to sell the new grounds which were annexed to the Observatory in the time of Leverrier. The extent of this land is about 28,000 square metres, and the Admiral states that the sale might realise 4*l.* per metre. This ground was given to the Government by the City of Paris, which sold it for the nominal price of 4*l.*; it is supposed that the Municipal Council will oppose the scheme, which has come to light quite unexpectedly.

BY the last mail from Iceland we have received a communication from Dr. Sophus Tromholt, dated Reykjavik, middle of December, in which he informs us that the weather had till then been mild and very unfavourable for his researches, in consequence of which he defers to the next mail giving to NATURE an account of his studies in the island. By the same mail apparently the reports which have lately been circulating in the Scandinavian press of terrific eruptions in the island have also arrived. It is stated in private letters that in November two enormous columns of smoke were seen in the direction of the great Vatnajökull, and that ashes had fallen in the Seidisfjord. According to the direction it seemed as if this eruption was far more easterly than that occurring in the spring. In connection herewith it may be of interest to call attention to the note published in NATURE (vol. xxix. p. 135), in which it is reported that on the night of

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